

International Exploration of Mars

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After a 20-year hiatus in missions to Mars, the planet has become the focal point of planetary research for all space-faring nations. This is a highly significant change in space science priorities, worldwide. The change was motivated by a resurgence of scientific and public interest in Mars following reports of signatures of microbes in Martian meteorites.

The objectives of national and multinational programs of exploration address a broad range of research topics including planetary evolution, past and present climates, and astrobiology. NASA's goals are centered on the study of potential habitats – past and present environments that may have been suitable for the origin of life. These goals are addressed through *in situ* measurements and through sample return. CNES has teamed with NASA to return samples, while also extending the research base by adding geophysical measurements via a network of landers. ASI has joined NASA and CNES by providing a drill to access the near subsurface. ESA will fly an orbiter and, potentially, a lander to Mars with the goal of addressing mineralogy, geochemistry, geology, and biology. ISAS will study the planet's aeronomy using an orbiter. Many other nations are contributors to these programs.

In this talk we describe the objectives and methodologies of the international exploration of Mars.

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